

DION® 6694

DESCRIPTION

DION® 6694 is a unique, chemically modified bisphenol fumarate polyester resin that demonstrates excellent chemical resistance in a wide range of aggressive environments. This premium resin has been used with great success in chlorine environments, most notably in the pulp and paper industry for chlorine dioxide and sodium hypochlorite containment, and in caustic/chlorine manufacture where it is used to produce chlorine cell covers. It also provides excellent resistance to highly acidic and extremely caustic environments.

GRP laminates made using DION® 6694 demonstrate excellent retention of mechanical properties at elevated temperatures.

DION® 6694 is well suited for hand-lay-up, filament winding and pultrusion.

TYPICAL PROPERTIES

PHYSICAL DATA IN LIQUID STATE AT 23°C

Properties	Unit	Value	Test method
Viscosity - Brookfield LVF sp. 2/30 rpm - ICI Cone & Plate	mPa·s(cP) mPa·s(cP)	400-520 500-550	ASTM D 2196-10 ISO 2884-1999
Density	g/cm ³	1.00-1.04	ISO 2811-2011
Acid Value	mgKOH/g	max. 10	ISO 2114-1996
Styrene Content	% weight	48-52	B070
Flash Point	°C	32	ASTM D 3278-95
Gel time: 5% Acc. 9802 P 1.5% Acc. 9826 1% NORPOL® PEROXIDE 1 (MEKP)	minutes	15-25	G020
Storage stability from date of manufacture	months	6	G180

TYPICAL GEL TIMES WITH VARYING CURING SYSTEMS AT 23°C

Curing system	A	B	C
DION® 6694	100	100	100
Acc. 9802 P	5	5	5
Acc. 9826	1.5	1.5	1.5
Inhibitor 9853	-	0.05	0.10
NORPOL® PEROXIDE 1 (MEKP)	1	1	1
Gel Time, minutes	20	35	55

The information herein is to help customers determine whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before using them to satisfy themselves as to contents and suitability. We warrant that our products will meet our written specifications. **Nothing herein shall constitute any other warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose**, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials, and in no event shall we be liable for special, incidental, or consequential damages.

TYPICAL CLEAR CASTING PROPERTIES AT 23°C

Properties	Unit	Value	Test method
Tensile Strength	MPa	55	ISO 527-2: 2012
Tensile Modulus	MPa	3400	ISO 527-2: 2012
Tensile Elongation	%	2.1	ISO 527-2: 2012
Flexural Strength	MPa	95	ISO 178-2011
Flexural Modulus	MPa	3300	ISO 178-2011
Heat Distortion Temperature	°C	145	ISO 75-1993
Hardness, Barcol 934-1	-	45	ASTM D 2583-13a
Water Absorption (28 days)	%	0.50	ISO 62-1999

TYPICAL LAMINATE* PROPERTIES

Properties	Unit	Value	Test method
Glass Content	%	33	-
Tensile Strength	MPa	95	ISO 527-2: 2012
Tensile Modulus	MPa	7600	ISO 527-2: 2012
Tensile Elongation	%	1.9	ISO 527-2: 2012
Flexural Strength	MPa	180	ISO 178-2011
Flexural Modulus	MPa	7350	ISO 178-2011

* 5 mm laminate, 6 x 450 g/m² CSM

STORAGE

To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 24°C/75°F and away from heat ignition sources and sunlight. Resin should be warmed to at least 18°C/65°F prior to use in order to assure proper curing and handling. All storage areas and containers should conform to local fire and building codes. Copper or copper containing alloys should be avoided as containers. Store separate from oxidizing materials, peroxides and metal salts. Keep containers closed when not in use. Inventory levels should be kept to a reasonable minimum with first-in, first-out stock rotation.

Additional information on handling and storing unsaturated polyesters is available in Reichhold's application bulletin "Bulk Storage and Handling of Unsaturated Polyester Resins." For information on other Reichhold resins or initiators, contact your sales representative or authorized Reichhold distributor.

SAFETY**READ AND UNDERSTAND THE MATERIAL SAFETY DATA SHEET BEFORE WORKING WITH THIS PRODUCT**

Obtain a copy of the material safety data sheet on this product prior to use. Material safety data sheets are available from your Reichhold sales representative. Such information should be requested from suppliers of all products and understood prior to working with their materials.

DIRECTLY MIXING ANY ORGANIC PEROXIDE WITH A METAL SOAP, AMINE, OR OTHER POLYMERIZATION ACCELERATOR OR PROMOTER WILL RESULT IN VIOLENT DECOMPOSITION